

Tabulated statement showing principal characteristics of areas of high and low pressure.

Barometer.	First observed.			Last observed.		Duration.	Velocity per hour.	Maximum pressure change in 12 hours, maximum abnormal temperature change in 12 hours, and maximum wind velocity.												
	Date.	Lat. N.	Long. W.	Lat. N.	Long. W.			Station.	Rise.	Date.	Station.	Fall.	Date.	Station.	Direction.	Miles per hour.	Date.			
High areas.		°	°	°	°	Days.	Miles.		Inch.			°								
I.....	3	47	107	35	85	1.0	58	Rockliffe, Ont.....	.50	4	Saugeen, Ont.....	24	4	Chattanooga, Tenn.....	ne.	30				
II.....	6	53	105	44	62	4.5	20	White River, Ont.....	.36	7	Davenport, Iowa.....	16	6	Chicago, Ill.....	n.	44				
III.....	11	54	102	40	70	2.5	35	Sydney, C. B. I.....	.34	13	Calgary, N. W. T.....	20	11	Green Bay, Wis.....	n.	28				
IV.....	14	42	104	32	79	2.0	35	Montrose, Colo.....	.34	14	Palestine, Tex.....	19	15	Hatteras, N. C.....	sw.	22				
V.....	17	45	125	28	93	2.0	44	Roseburgh, Oregon.....	.32	16	Saint Paul, Minn.....	23	18	Galveston, Tex.....	n.	30				
VI.....	18	48	125	32	78	6.0	27	Green Bay, Wis.....	.42	20	Tucson, Ariz.....	26	19	Amarillo, Tex.....	n.	40				
VII.....	26	47	97	35	77	1.5	41	Rockliffe, Ont.....	.34	28	Pittsburg, Pa.....	15	26	Hatteras, N. C.....	n.	36				
VIII.....	30	50	108	49	96	1.5	18	Winnipeg, Man.....	.38	30	Abilene, Tex.....	35	31	Bismarck, N. Dak.....	nw.	28				
Mean.....						2.7	35		.37			22					32			
Low areas.									Fall.			Rise.								
I.....	1	38	100	43	85	1.0	37	Montreal, Quebec.....	.40	1	Dubuque, Iowa.....	16	1	Chicago, Ill.....	sw.	60				
II.....	2	37	98	49	69	2.5	24	Chatham, N. B.....	.36	4	New York, N. Y.....	24	4	Buffalo, N. Y.....	sw.	44				
III.....	3	41	123	47	87	2.5	40	Dodge City, Kans.....	.30	4	Kansas City, Mo.....	26	5	Amarillo, Tex.....	s.	60				
IV.....	6	45	118	43	66	5.5	28	Toronto, Ont.....	.34	10	Montrose, Colo.....	16	6	Abilene, Tex.....	sw.	66				
V.....	14	39	99	49	64	2.5	37	Eastport, Me.....	.38	16	Duluth, Minn.....	16	15	Boston, Mass.....	w.	36				
VI.....	15	45	123	42	69	7.0	27	Erie, Pa.....	.36	18	Roseburgh, Oregon.....	17	16	Fort Canby, Wash.....	s.	60				
VII.....	19	32	101	28	98	0.5	30	Abilene, Tex.....	.28	19	Tucson, Ariz.....	32	18	Abilene, Tex.....	sw.	48				
VIII.....	21	52	112	50	66	3.5	27	Swift Current, N. W. T.....	.52	21	Cheyenne, Wyo.....	26	22	Block Island, R. I.....	sw.	40				
IX.....	25	50	88	50	65	3.0	19	Montreal, Quebec.....	.50	26	Father Point, Quebec.....	19	27	Kitty Hawk, N. C.....	nw.	53				
X.....	26	53	108	50	87	4.0	11	do.....	.50	26	Miles City, Mont.....	15	26	Huron, S. Dak.....	se.	54				
XI.....	30	33	103	29	99	1.0	30	Fort Smith, Ark.....	.14	30	Abilene, Tex.....	11	29	Corpus Christi, Tex.....	se.	48				
Mean.....						3.0	28		.38			20					52			

## NORTH ATLANTIC STORMS FOR MAY, 1892 (pressure in inches and millimeters; wind-force by Beaufort scale).

The paths of storms that appeared over the west part of the north Atlantic Ocean during May, 1892, are shown on Chart I. These paths have been determined from reports of observations by shipmasters received through the co-operation of the Hydrographic Office, Navy Department, and the "New York Herald Weather Service."

In May there is usually an increase of barometric pressure over the north Atlantic Ocean, save in the region of the Cape Verde Islands and over the West Indies and the Caribbean Sea, the increase being most marked over and east of the Banks of Newfoundland, when it is more than .20. The principal track of May storms is traced from Newfoundland north of east to the region north of the British Isles. Near the 40th meridian a track branches northeastward to Iceland, and west of the British Isles a path branches southeastward over the Bay of Biscay.

The storms of the current month were of small intensity and generally short-lived. Reports of the 1st showed two storms, one over the Banks of Newfoundland and the other west of the British Isles. Over mid-ocean the pressure was high. By the 2d the western storm had passed north of the region of observation; the one near the British Isles had advanced to the Bay of Biscay with evidence of considerable strength. This storm apparently remained central over or near the Bay of Biscay until the 4th, and the pressure continued high west of the 25th meridian. From the 5th to 14th the pressure continued high over the eastern part of the ocean.

On the 5th low area II advanced over the north part of the Gulf of Saint Lawrence, and on the 6th was central north of Newfoundland. This storm occupied the region east and northeast of the Banks of Newfoundland until the 11th, with an apparent increase of energy, after which it disappeared over mid-ocean in high latitudes. A storm also appeared central near the Azores on the 5th, and the pressure continued low over mid-ocean until the 12th. On the 12th low area IV was central near western Nova Scotia, from which position it moved northeastward and disappeared by the following date.

From the 13th to the 16th the pressure was high over mid-ocean, and high pressure continued over the western part of the ocean from the 14th to 16th. From the 15th to 17th the pressure was low north and west of the British Isles. On the 17th low area V advanced over northern Newfoundland, and

on the 18th was central northeast of Newfoundland, and strong to whole gales prevailed along the trans-Atlantic tracks between the 30th and 40th meridians. On the 19th a storm appeared east of the Grand Banks, and moving thence northeastward disappeared over mid-ocean in high latitudes by the 21st. From the 17th until the close of the month the pressure continued generally low over mid-ocean. From the 22d to 24th a storm of moderate strength passed from the south Atlantic coast to the lower Saint Lawrence river. This storm probably moved eastward and reached the British Isles on the 29th, where low pressure prevailed from the 22d to the close of the month.

## OCEAN ICE IN MAY.

The following table shows the southern and eastern limits of the region within which icebergs or field ice were reported for May during the last 10 years:

Southern limit.			Eastern limit.		
Month.	Lat. N.	Long. W.	Month.	Lat. N.	Long. W.
May, 1883.....	40 30	47 00	May, 1883.....	45 40	45 12
May, 1884.....	41 30	47 30	May, 1884.....	43 30	44 50
May, 1885.....	40 50	48 15	May, 1885.....	42 30	40 10
May, 1886.....	41 35	51 30	May, 1886.....	45 55	46 13
May, 1887.....	39 35	46 00	May, 1887.....	39 38	46 00
May, 1888.....	41 00	46 00	May, 1888.....	41 00	46 00
May, 1889.....	43 07	55 47	May, 1889.....	49 46	36 48
May, 1890.....	40 50	50 28	May, 1890.....	44 12	36 25
May, 1891.....	40 49	49 07	May, 1891.....	45 00	45 00
May, 1892.....	42 14	51 20	May, 1892.....	45 05	41 14
Mean.....	41 14	49 17	Mean.....	44 50	42 48

\* On the 7th three small pieces of ice were reported in N. 49° 03', W. 33° 40'.

The limits of the region within which icebergs or field ice were reported for May, 1892, are shown on Chart I by ruled shading.

The southernmost ice reported, icebergs observed on the 31st in the position given, was about 1° north of the average southern limit, and the easternmost ice reported, an iceberg noted on the 23d in the position given in the table, was about 1½° west of the average eastern limit of Arctic ice for May.

Ice was reported in great quantities along the southeast edge of the Banks of Newfoundland, and on the 31st a small

ice floe was encountered in N. 44° 33', W. 60° 22', and another in N. 44° 29', W. 60° 37'.

#### OCEAN FOG IN MAY.

The limits of fog belts for May, 1892, as determined from reports of shipmasters, are shown on Chart I by dotted shading. Less than the usual amount of fog was reported. Near the Banks of Newfoundland fog was reported on 12 dates; between the 55th and 65th meridians on 11 dates; and

west of the 65th meridian on 11 dates. Compared with the corresponding month of the last 4 years the dates of occurrence of fog near the Grand Banks numbered 6 less than the average; between the 55th and 65th meridians 3 less than the average; and west of the 65th meridian 6 less than the average. The fog in the regions referred to and that noted at regular stations of the Weather Bureau on the New England and middle Atlantic coasts generally attended the approach or passage of general storms.

#### TEMPERATURE OF THE AIR (expressed in degrees, Fahrenheit).

The distribution of mean temperature over the United States and Canada for May, 1892, is exhibited on Chart II by dotted isotherms. In the table of miscellaneous meteorological data the monthly mean temperature and the departure from the normal are given for regular stations of the Weather Bureau. The figures opposite the names of the geographical districts in the columns for mean temperature and departure from the normal show, respectively, the average for the several districts. The normal for any district may be found by adding the departure to the current mean when the temperature is below the normal and subtracting when above. The monthly mean temperature for regular stations of the Weather Bureau represents the mean of the maximum and minimum temperatures.

The mean temperature was highest in the Colorado Desert, California, in the Gila Valley, Arizona, and along the lower Rio Grande River in Texas, where it was above 80. In districts east of the 100th meridian and south of the 35th parallel, and over the west part of the southern plateau region the mean temperature was above 70, and the mean readings were above 60 south of a line traced from the south New Jersey coast westward to northern Missouri, thence west-southwest to east-central Arizona, thence irregularly north-westward to north-central Arizona, and thence southward over the interior of California to the coast near Los Angeles. The mean temperature was lowest in the mountains of Colorado and at Anticosti Island, Gulf of Saint Lawrence, where it was below 40; it was below 45 at Central Pacific Railroad stations in the Sierra Nevada Mountains, California, and in the British Northwest Territory; and was below 50 in eastern and northern Maine, and north of a line traced from Georgian Bay to north-central New Mexico, and thence to extreme northwestern Montana.

#### DEVIATIONS FROM NORMAL TEMPERATURE.

The following table shows for certain stations, as reported by voluntary observers, (1) the normal temperature for May for a series of years; (2) the length of record during which the observations have been taken, and from which the normal has been computed; (3) the mean temperature for May, 1892; (4) the departure of the current month from the normal; (5) and the extreme monthly mean for May during the period of observation and the years of occurrence:

State and station.	(1) Normal for the month of May.	(2) Length of record.	(3) Mean for May, 1892.	(4) Departure from normal.	(5) Extreme monthly mean for May.			
					Highest.	Year.	Lowest.	Year.
<i>Arizona.</i>	°	Years	°	°	°		°	
Fort Apache.....	62.4	20	56.8	- 5.6	67.6	1881	55.6	1884
Fort Mohave.....	80.2	21	77.7	- 2.5	86.8	1875	75.6	1888
Whipple Barracks.....	60.7	21	54.3	- 6.4	68.6	1876	54.3	1892
<i>Arkansas.</i>								
Lead Hill.....	67.6	10			74.4	1886	62.9	1882
<i>California.</i>								
Fort Bidwell.....	55.0	20	52.8	- 2.2	61.8	1881	49.2	1879
Riverside.....	65.5	10	64.9	- 0.6	69.0	1885	60.3	1891
<i>Colorado.</i>								
Las Animas.....	60.1	10	54.1	- 6.0	65.6	1886	54.1	1892
<i>Florida.</i>								
Merritts Island.....	75.4	10	78.3	+ 2.9	79.2	1884	70.3	1886

#### Deviations from normal temperature—Continued.

State and station.	(1) Normal for the month of May.	(2) Length of record.	(3) Mean for May, 1892.	(4) Departure from normal.	(5) Extreme monthly mean for May.			
					Highest.	Year.	Lowest.	Year.
<i>Georgia.</i>	°	Years	°	°	°		°	
Forsyth.....	72.7	18	73.4	+ 0.7	75.8	1880	69.2	1877
<i>Idaho.</i>								
Boise Barracks.....	58.7	18	55.6	- 3.1	63.5	1874	53.0	1880
Fort Sherman.....	54.9	9	53.4	- 1.5	57.9	1891	51.5	1882
<i>Illinois.</i>								
Centradia.....	64.8	11			70.5	1881	59.0	1882, 1891
<i>Indiana.</i>								
La Fayette.....	61.0	12	58.8	- 2.2	69.4	1881	55.0	1882
<i>Indian Territory.</i>								
Fort Supply.....	65.5	13	63.8	- 1.7	72.1	1886	58.8	1882
<i>Iowa.</i>								
Cresco.....	56.4	20	52.4	- 4.0	64.1	1881	49.9	1888
<i>Kansas.</i>								
Eureka Ranch.....	64.6	9	55.0	- 9.6	69.5	1887	55.0	1892
Independence.....	66.3	20	65.0	- 1.3	72.0	1880	60.8	1872
Salina.....	66.0	9	58.4	- 7.6	71.3	1887	58.4	1892
<i>Louisiana.</i>								
Grand Coteau.....	74.2	9	73.8	- 0.4	75.7	1884	70.4	1891
<i>Maine.</i>								
Orono.....	51.7	22	51.7	0.0	55.9	1887	41.8	1884
<i>Maryland.</i>								
Cumberland.....	60.0	29	62.3	+ 2.3	67.0	1880	57.6	1882
<i>Michigan.</i>								
Kalamazoo.....	57.5	15	57.2	- 0.3	66.0	1881	41.3	1882
<i>Missouri.</i>								
Sedalia.....	64.5	9	62.2	- 2.3	69.5	1887	60.1	1882
<i>Montana.</i>								
Fort Custer.....	55.1	11			58.3	1886	52.2	1888
<i>Nebraska.</i>								
Fort Robinson.....	57.3	8	48.9	- 8.4	66.4	1886	48.9	1892
Genoa (near).....	59.9	16	52.2	- 7.7	67.6	1880	52.2	1892
<i>Nevada.</i>								
Browns.....	65.4	20	66.2	+ 0.8	71.3	1889	60.5	1873
Carson City.....	57.2	14	54.6	- 2.6	60.4	1875	53.9	1891
<i>New Hampshire.</i>								
Hanover.....	54.4	57	52.7	- 1.7	62.0	1880	50.2	1882
<i>New Mexico.</i>								
Deming.....	74.0	10	76.1	+ 2.1	79.2	1886	69.8	1884
Fort Wingate.....	66.1	21	54.2	- 5.9	64.9	1875	54.2	1892
<i>New York.</i>								
Cooperstown.....	54.5	38	52.4	- 2.1	60.7	1880, 1887	49.7	1882
Plattsburgh Barracks.....	54.9	21	51.8	- 3.1	60.9	1887	50.3	1882
<i>North Carolina.</i>								
Lenoir.....	62.6	19	64.6	+ 2.0	67.8	1887	48.0	1881
<i>Oklahoma.</i>								
Fort Reno.....	67.3	9			73.9	1886	64.0	1885
Fort Sill.....	69.8	20	68.8	- 1.0	75.6	1886	64.7	1885
<i>Oregon.</i>								
Bandon.....	54.3	8	51.8	- 2.5	55.8	1891	51.8	1892
Eola.....	54.2	22	59.6	+ 5.4	59.6	1892	45.2	1880
<i>Pennsylvania.</i>								
Dyberry.....	54.3	25	51.6	- 2.7	64.1	1880	48.4	1882
Grampian Hills.....	56.5	27	56.5	0.0	65.1	1887	50.0	1882
Wellsborough.....	55.8	13	50.0	- 5.2	68.4	1879	50.4	1891
<i>South Carolina.</i>								
Statesburg.....	70.1	11	70.2	+ 0.1	73.8	1881	65.9	1885
<i>South Dakota.</i>								
Fort Sully.....	58.7	21	50.6	- 8.1	68.4	1871	50.6	1892
<i>Texas.</i>								
Austin.....	74.6	17	75.0	+ 0.4	80.0	1886	72.3	1879
Silver Falls.....	69.9	6	70.0	+ 0.1	76.6	1886	65.8	1888
<i>Utah.</i>								
Terrace.....	61.6	20	62.8	+ 1.2	71.9	1888	50.6	1882
<i>Vermont.</i>								
Stratford.....	55.6	19	48.2	- 7.4	63.0	1887	48.2	1892
<i>Virginia.</i>								
Dale Enterprise.....	64.3	12	65.0	+ 0.7	72.0	1887	62.7	1891
<i>Washington.</i>								
Fort Townsend.....	54.0	20	52.4	- 1.6	57.0	1889	50.2	1880
<i>West Virginia.</i>								
Parkersburg.....	67.4	11	62.1	- 5.3	78.4	1881	58.9	1891
<i>Wisconsin.</i>								
Embarrass.....	57.6	21	53.0	- 4.6	67.5	1880	51.2	1888
Madison.....	56.5	23	52.4	- 4.1	63.8	1887	51.5	1883
<i>Wyoming.</i>								
Fort Washakie.....	52.3	9	47.6	- 4.7	59.2	1886	47.6	1892